WLV2500 Series

Wireless Control Link and

Video Transmission Systems

Installation/Operation Manual

C914M (7/96)

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REVISION HISTORY

Manual #	Date	Comments
C914M	7/96	Original manual.
	8/96	Revised Section 7.0 and Figure 8 to include Rev. G of video board.
	11/96	Revised Figure 6 per ECO 96-284. Added Section 8.0, “Wiring Diagram.”

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INSTALLATION/OPERATION MANUAL
WLV2500 SERIES
WIRELESS CONTROL LINK AND VIDEO TRANSMISSION SYSTEMS

1.0 WARNINGS

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should only be done by qualified service personnel and conform to all FCC regulations and Local codes.

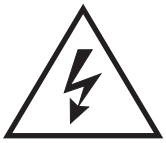
2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6 or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.

3. The product may bear the following marks:

4. Only use replacement parts recommended by Pelco.

5. After replacement/repair of this unit's electrical components, conduct a resistance measurement between line and exposed parts to verify the exposed parts have not been connected to line circuitry.

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



CAUTION:
TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

CAUTION:
RISK OF ELECTRIC SHOCK.
DO NOT OPEN.

Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

2.0 SCOPE

This manual covers the installation of the WLV2500 Series of outdoor wireless systems.

3.0 DESCRIPTION

To make a WLV2500 system, a WLV500 control system is combined with a WLV200 video transmission system (refer to Figure 1).

The wireless control systems of the WLV500 Series provide wireless remote control of camera positioning and zoom functions.

The wireless video transmission systems of the WLV2000 Series provide wireless distribution of a single channel of a full-motion color video and audio signal. The systems are compatible with all RS-170A (NTSC) camera and video monitor systems.

3.1 MODELS

WLV2500KTE-1 - Consists of the following:

1. WLV500KTE-1L - Coaxitron®-control transmitter and receiver operating at 2481 MHz. Includes power supplies and directional antennas that are left-hand circularity polarized (LHCP). Receive antenna has 11 dBi of gain. Installed in NEMA-rated enclosures with selectable voltage input.

2. WLV2000KTE-1R - Transmitter and receiver operating at 2421.5 MHz. Includes power supplies and directional antennas that are right-hand circularity polarized (RHCP). Receive antenna has 11 dBi of gain. Installed in NEMA-rated enclosures with selectable voltage input.

WLV2500KTE-3 - Consists of the following:

1. WLV500KTE-3R - Coaxitron®-control transmitter and receiver operating at 2402 MHz. Includes power supplies and directional antennas that are right-hand circularity polarized (RHCP). Receive antenna has 11 dBi of gain. Installed in NEMA-rated enclosures with selectable voltage input.

2. WLV2000KTE-3L - Transmitter and receiver operating at 2461.5 MHz. Includes power supplies and directional antennas that are left-hand circularity polarized (LHCP). Receive antenna has 11 dBi of gain. Installed in NEMA-rated enclosures with selectable voltage input.

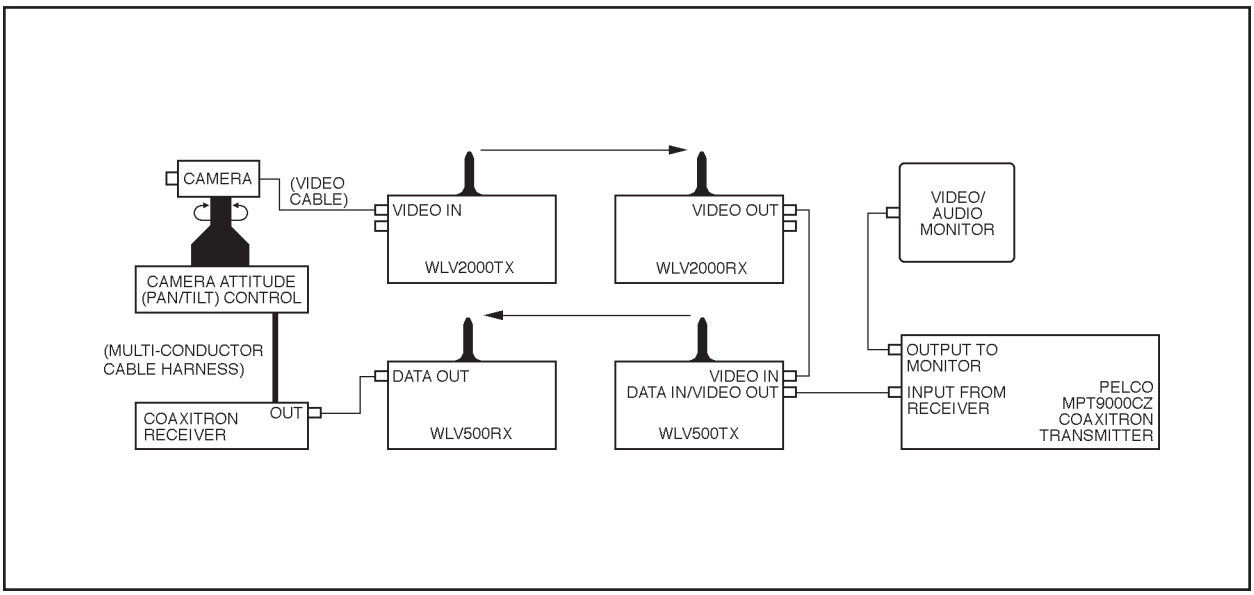


Figure 1. Typical WLV500 Control Link and WLV2000 Video Link Configuration

4.0 ANTENNA LOCATION

To provide the best reception, proper placement of the transmit and receive antennas is important. Reception will be best when:

- The antennas are a minimum of 8-10 feet above the floor (indoors) or ground (outdoors).
- The transmit and receive antennas point directly at each other.
- The receive antenna is attached directly to the receiver. If you must extend the cable between the antenna and receiver, use a high-quality, low-loss, 50-ohm cable (RG-8 or similar for WLV500, or RG-316 or similar for WLV2000). Keep the extension as short as possible. The shorter the extension, the better the reception will be.
- There are as few obstacles as possible between the transmit and receive antennas. Obstacles such as walls, floors, shelves, machinery, boxes, trees, chain link fences, and vehicle traffic will degrade the signal. If possible, do the following to avoid obstacles:

  - Raise the antennas 8-10 feet above the obstacles.

  - Move the antennas to different locations.

  - Move the obstacles.

- The antennas do not exceed their maximum range. Indoors this is about 300 feet (91.4 m), depending on the number and type of obstacles. Outdoors this is 2,000 feet (609.6 m) with no obstacles blocking the direct line of sight between the antennas.
- The control link and video link antennas at the same site are a minimum of three feet apart. To reduce interference, only use polarized antennas on the video link. It is recommended, but not required, that the control link be the opposite polarity of the video link. Refer to Figure 2.
- Polarized antennas on the transmitter and receiver are the same polarity. If the transmit antenna is a left-hand circularity polarized (LHCP) antenna, the receive antenna must be left-hand polarity. If the transmit antenna is a right-hand circularity polarized (RCHP) antenna, the receive antenna must be right-hand polarity (refer to Figure 2).
- A WLV2000 transmitter is not too close to a WLV2000 receiver on a different frequency. In Figure 3, transmitter 1 is closer to receiver 2 than transmitter 2 and is interfering with the signal between transmitter 2 and receiver 2. Provide more separation between equipment if you are getting interference.

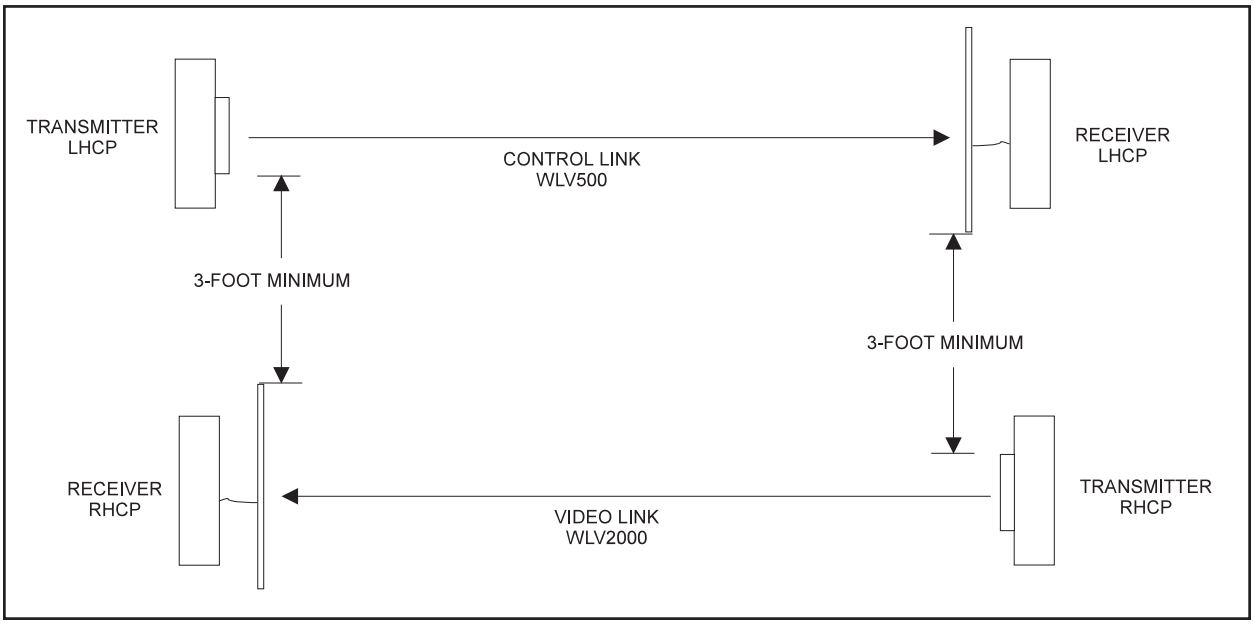


Figure 2. Transmitter-Receiver Placement at Same Site

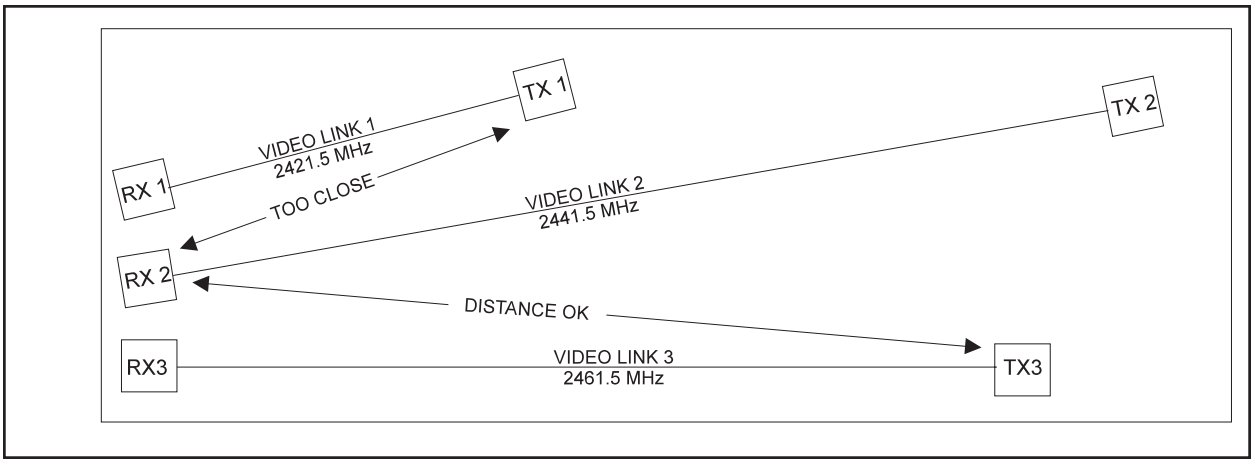


Figure 3. Multiple-System Interference

5.0 INSTALLATION

NOTE: Proper placement of the transmit and receive antennas is important for best reception. Read Section 4.0, "Antenna Location," before installing the equipment.

Install the WLV500 receiver and WLV2000 transmitter at the remote site where your camera will be. Install the WLV500 transmitter and WLV2000 receiver at the site where your video/audio monitor will be (refer to Figure 1).

5.1 ENCLOSURE MOUNTING

Mount the enclosures. You can attach an enclosure directly to a flat mounting surface or you can use the adjustable mounting brackets that are supplied.

An enclosure can be mounted directly to a flat surface if the enclosure will be at the same elevation and parallel in both directions (vertically and horizontally) as the enclosure for the receiver. Hardware is not supplied.

NOTE: If you mount the WLV2000 receiver enclosure directly to a flat surface, you will not be able to adjust the enclosure in Section 5.4, "Antenna Alignment," for the best signal reception.

To mount an enclosure to a pole using the adjustable mounting brackets, refer to the manuals for the PA9000 adapter and PA102 pole mount to install the pole mount and adapter. Then follow steps a through d in the next paragraph.

To mount an enclosure to a flat surface with the adjustable mounting brackets, refer to Figure 6 and perform the following steps:

1. Fasten two of the four mounting brackets (item 12) to the desired mounting surface. Install the brackets 10.75 inches (27.31 cm) apart. Hardware is not supplied.

2. Using the hardware items A, B, and C, attach the four adjustable straps (item 13) to the brackets installed in (a) above. At this time do not tighten the screws.

3. Using hardware items B, C, D, and E, attach the other two mounting brackets to the enclosure.

4. Attach the enclosure to the adjustable straps with hardware items A, B, and C. The straps have multiple holes so that you can aim the enclosure toward the opposite site. When you have the enclosure positioned properly, tighten all screws. (If you are installing a WLV2000 receiver enclosure, tighten all screws just enough to keep the enclosure from moving. The final tightening of the screws will be done later.)

Proceed to Section 5.2, "Wiring."

5.2 WIRING

> **NOTE:** In the following steps when you assemble coaxial cable, install a BNC connector on only one end. Run the bare end of the cable through the cable entry gland on the enclosure so that the end with the BNC connector is inside the enclosure. Then add a BNC connector to the other end of the cable. Refer to Table A for the type of coaxial cable to use.

Refer to Figure 1 to see the connections between equipment.

1. Connect a coaxial cable from the DATA IN of the WLV500 wireless transmitter to the input of the Coaxitron® transmitter.

2. Connect a coaxial cable from the VIDEO IN of the WLV500 wireless transmitter to the VIDEO OUT of the WLV2000 wireless receiver.

3. Connect a coaxial cable from the DATA OUT of the WLV500 wireless receiver to the output of the Coaxitron® receiver.

> **NOTE:** If you are connecting the wireless receiver to Intercept® dome drives DD08CXX, DD08EXX, DD14CXX, or DD14EXX (domes with 360 degree rotation), refer to Section 7.0, "Intercept® Dome Modification," to modify the dome to work with the wireless receiver.

4. Connect a coaxial cable from the video input of the CCTV monitor to the VIDEO OUT connector on the WLV2000 wireless receiver.

5. If you are using sound, connect a coaxial cable from the audio input of the monitor to the AUDIO OUT connector on the WLV2000 wireless receiver. Connect another coaxial cable from the camera, microphone amplifier, or other audio source to the AUDIO connector on the WLV2000 wireless transmitter.

> **NOTE:** Do not refer to Table A. The video cables are 75 ohms. The audio impedance is 600 ohms and you must use 600-ohm cables.

Proceed to Section 5.3, "Power."

5.3 POWER

1. Supplied with the enclosure are three electrical plugs, one with blue jumper wires, one with green jumper wires, and one with white jumper wires. Select the jumper to match the AC power input you will use and discard the other two plugs:

Blue	120 VAC input
Green	230 VAC input
White	24 VAC input

2. Connect the plug to the mating socket inside the enclosure.

3. Connect power:

   - **120 VAC -** Plug the power cord into 120 VAC.

   - **230 VAC -** Either remove the power cord and connect 230 VAC directly to the power terminal block as shown in Figure 4, or cut the plug off the end of the power cord, connect a 230 VAC plug to the cord, and plug in the cord.

   - **24 VAC -** Either remove the power cord and connect 24 VAC directly to the power terminal block as shown in Figure 4, or cut the plug off the end of the power cord and connect the cord to 24 VAC.

   The transmitter or receiver should become fully operational within two minutes after the power is applied.

Proceed to Section 5.4, "Antenna Alignment."

Table A. Video Coaxial Cable Wiring Distances

Cable Type	Maximum Distance
RG59	750 ft (229 m)
RG6	1,000 ft (305 m)
RG11	1,500 ft (457 m)

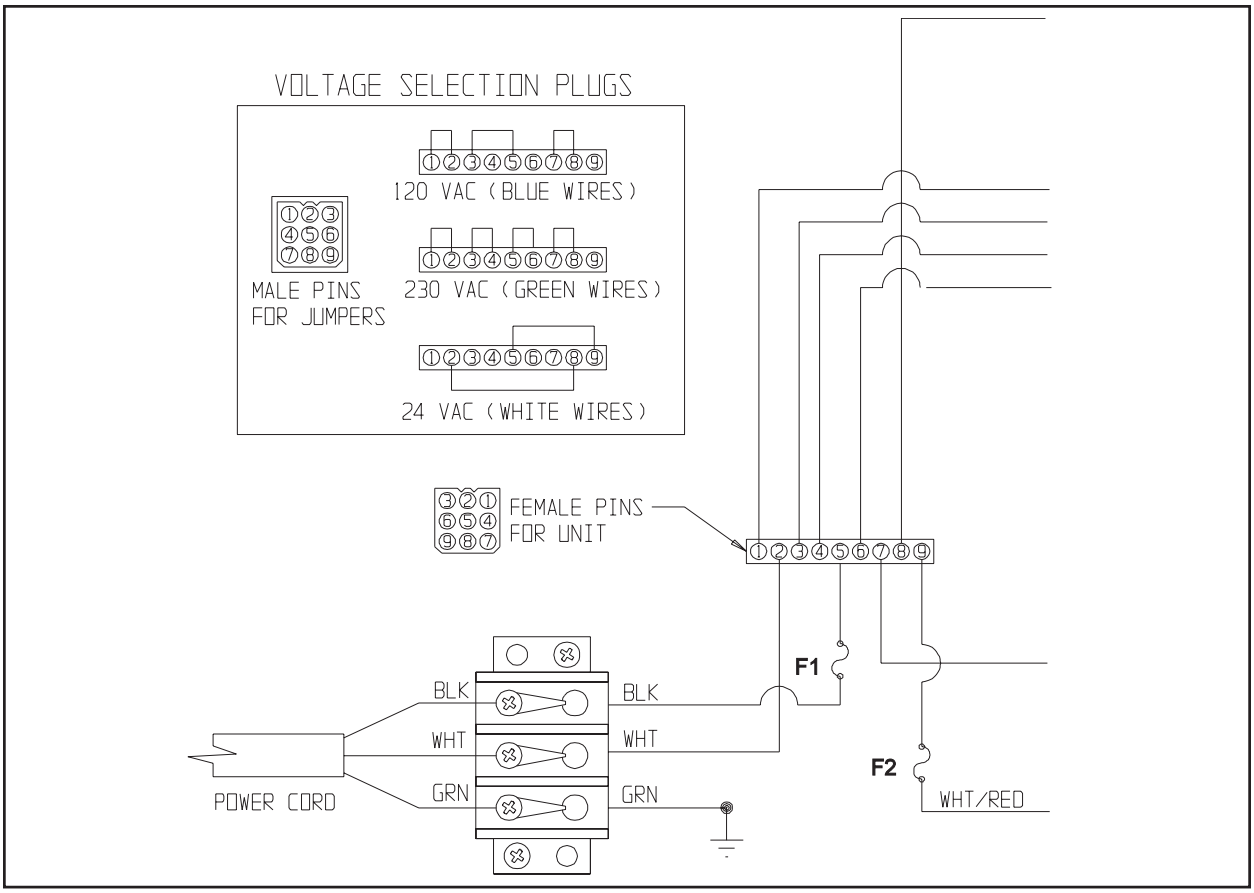


Figure 4. Power Connections (Outdoor Models Only)

5.4 ANTENNA ALIGNMENT

NOTE: This section applies only to the WLV2000 wireless receiver.

1. Connect a high impedance voltmeter to the RSSI (Received Signal Strength Indication) test points on the bottom of the enclosure:

   a. Set the voltmeter on a low-volt DC scale (3 or 10 volts).

   b. Connect the negative lead from the voltmeter to the flat-head Phillips screw on the left on the bottom of the enclosure (part of item I in Figure 6).

   c. Connect the positive lead from the voltmeter to the Phillips screw to the right of the screw where you connected the negative lead.

   d. Adjust the enclosure until the voltmeter indicates minimum voltage (strongest RSSI signal). Refer to Figure 5 as a guideline to see how the voltage changes with distance. The meter reading will vary depending on the obstacles between antennas and the types of antennas used.

   e. Tighten all screws on the mounting bracket.

SYSTEM RANGE Feet	(Meters)	WLV2000 SYSTEM RSSI	PATH LOSS NO OBSTACLES dBm
2,025	(617)	0.634	-96
1,600	(488)	0.579	-94
1,275	(389)	0.532	-92
1,015	(309)	0.489	-90
805	(245)	0.448	-88
640	(195)	0.412	-86
507	(155)	0.377	-84
403	(123)	0.347	-82
320	(98)	0.318	-80
255	(78)	0.292	-78
202	(62)	0.269	-76
160	(49)	0.248	-74
128	(39)	0.229	-72
101	(31)	0.214	-70
80	(24)	0.200	-68
64	(20)	0.188	-66
51	(16)	0.179	-64
40	(12)	0.173	-62
32	(10)	0.170	-60
25	(8)	0.168	-58
20	(6)	0.166	-56
16	(5)	0.165	-54
13	(4)	0.164	-52

RSSI versus LOSS-OF-SIGNAL RANGE

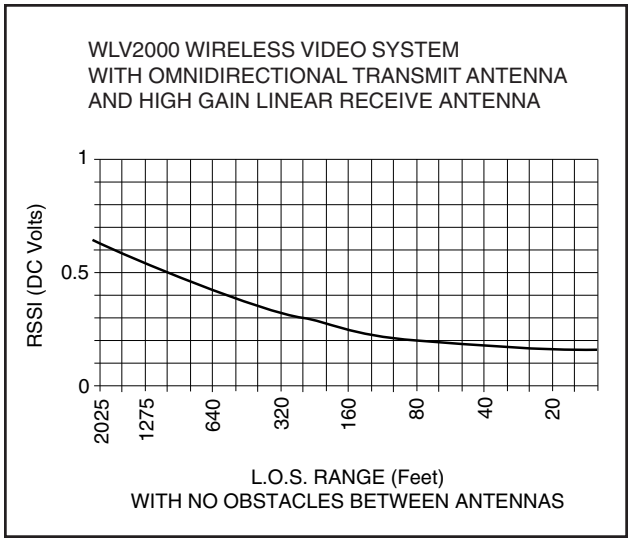


Figure 5. Antenna Signal Strength versus Distance

5.5 TROUBLESHOOTING

CAUTION: Do not service the transmitter or receiver. If you open the transmitter or receiver unit, you will break the seals and void the warranty.

5.5.1 No Picture

1. To verify if the camera is operating properly, connect the camera directly to a monitor that you know is good.

2. To verify if the monitor is operating properly, connect the monitor directly to a camera that you know is good.

3. Check the cables between the wireless transmitter and receiver and the equipment to which they connect.

4. Check the power supply voltages for the wireless transmitter and receiver. If the voltage at the transmitter or receiver is less than 11 VDC, replace the unit's power supply.

5.5.2 Poor Picture

1. Refer to Section 4.0, "Antenna Location," and verify that the transmit and receive antennas are positioned properly.

2. If you can not eliminate interference from other signals, contact Pelco about replacing your wireless transmitter and receiver with units that operate on a different frequency.

6.0 EXPLODED ASSEMBLY DIAGRAM (OUTDOOR MODELS ONLY)

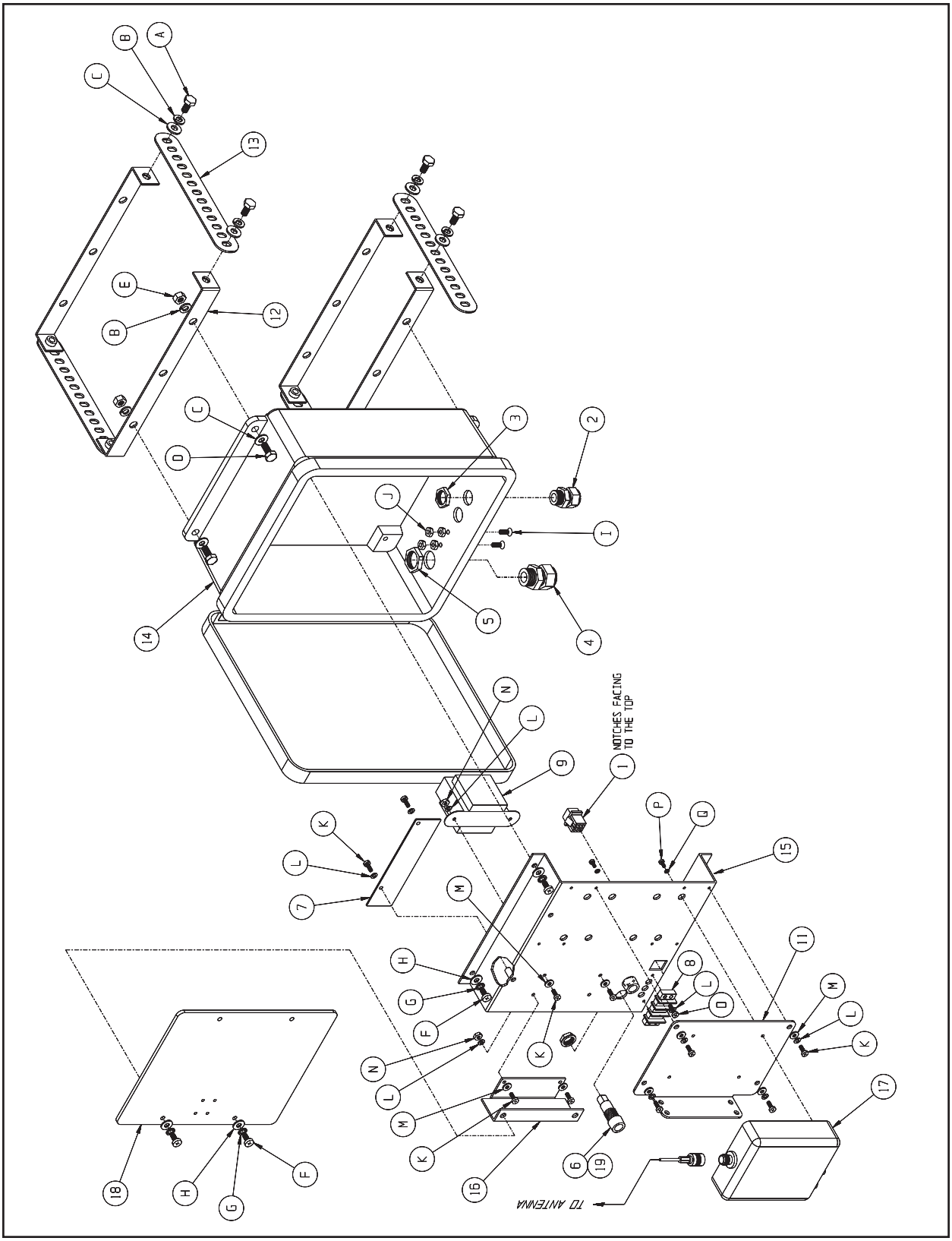


Figure 6. Outdoor Enclosure Exploded Assembly Diagram

6.1 MECHANICAL PARTS LIST

Item	Quantity	Description	Part Number
1	1	9-Pin Connector	CON03-06-1091
2	2	Gland	EH400010003
3	2	Gland Nut	EH400010004
4	1	Gland	CX950010000
5	1	Gland Nut	CX950010001
6	2	Fuse Holder	FUS342012L
7	1	Power Supply Assembly	PCB9000281ASSY
8	1	3-Position Terminal Block	TRB3-140Y
9	1	Transformer	TRF21162.01.OCM
10	1	Power Cord (not shown)	WIRC1318006BL
11	1	Transmitter/Receiver Mounting Plate	WLV4100COMP
12	4	Fixed Tilt Bracket	WLV4155COMP
13	4	Adjustment Bracket	WLV4156COMP
14	1	Enclosure Box	WLVEH4000COMP
15	1	Mounting Plate	WLVEH4151COMP
16	1	Antenna Mounting Bracket	WLVEH5152COMP
17	1	Wireless Transmitter or Receiver	—
18	1	Receiver Antenna	—
19	2	1/4 Amp, Slow Blow, 3AG Fuse	FUS1/4SB
A	8	Screw, 1/4-20 x 1/2-inch	ZH1/4-20X.500CH
B	12	Split Lock Washer, 1/4-inch	ZH1/4LWSSL
C	12	Flat Washer	ZH260X562X65C
D	4	Bolt, 1/4-20 x 5/8-inch	ZH1/420X.625CH
E	4	1/4-20 Nut	ZH1/4-20NUTCH
F	6	Screw, 10-32 x 1/2-inch, Pan Head, Phillips	ZH10-32X.500SPP
G	6	Internal Tooth Lock Washer, #10	ZH10LWSIS
H	6	Flat Washer, #10	ZH204X436X60C
I	2	Screw, 8-32 x 1/2-inch, Flat Head, Phillips	ZH8-32X.500SFS
J	4	8-32 Nut	ZH8-32NUTSH
K	10	Screw, 6-32 x 3/8-inch, Pan Head, Phillips	ZH6-32X.375SPP
L	12	Internal Tooth Lock Washer, #6	ZH6LWSIS
M	8	Flat Washer, #6	ZH148X375X32C
N	4	6-32 Nut	ZH6-32NUTSH
O	2	Screw, 6-32 x 1/2-inch, Pan Head, Phillips	ZH6-32X.500SPP
P	4	Screw, 4-40 x 1/4-inch, Pan Head, Phillips	ZH4-40X.250SPP
Q	4	Internal Tooth Lock Washer, #4	ZH4LWSIS

7.0 INTERCEPT® DOME MODIFICATION

To use the WLV500 wireless control system with Intercept® dome drives DD08CXX, DD08EXX, DD14CXX, or DD14EXX (domes with 360 degree rotation), the following steps must be performed:

> **NOTE**: Refer to Figure 7, which gives a general layout of the dome drive and indicates the items that need to be accessed in order to accomplish the change.

1. Refer to Figure 7 and remove the cover that houses the VIDEO, CPU and POWER SUPPLY boards plugged into the Coaxitron® receiver backplane.

2. After removing the cover, extract the VIDEO BOARD. Remove or clip one lead of the 75-ohm termination resistor: R26 on Rev. F boards or R20 on Rev. G boards. Also remove or clip one lead of capacitor C56 on Rev. G boards. Refer to Figure 8 for the location of the components. Reinstall the board after removing or clipping the components.

3. Disconnect all plugs and connectors to the Coaxitron® receiver backplane and remove the screws whose locations are indicated in Figure 7 (that part of the card cage holding the boards will also detach as a unit along with the backplane).

4. After freeing the backplane and card cage, orient the backplane to display the back of the backplane. Solder wires as indicated in Figure 10: Solder a wire from P13 to pin 1 of Plug 8 (slip ring plug) and solder a wire from P14 to pin 8 of Plug 8 (slip ring plug).

> **NOTE**: This step has changed Plug 13 on the batwing by making pin 11 ground and pin 19 video core. This is indicated in the abbreviated reference wiring diagram at the bottom of Figure 10.

5. Reinstall the backplane and card cage.

6. On the back box, use pins 11 and 19 to create a coaxial connection to the WLV2000 wireless transmitter. Connect the WLV500 receiver to the existing video connection (refer to Figures 9 and 10).

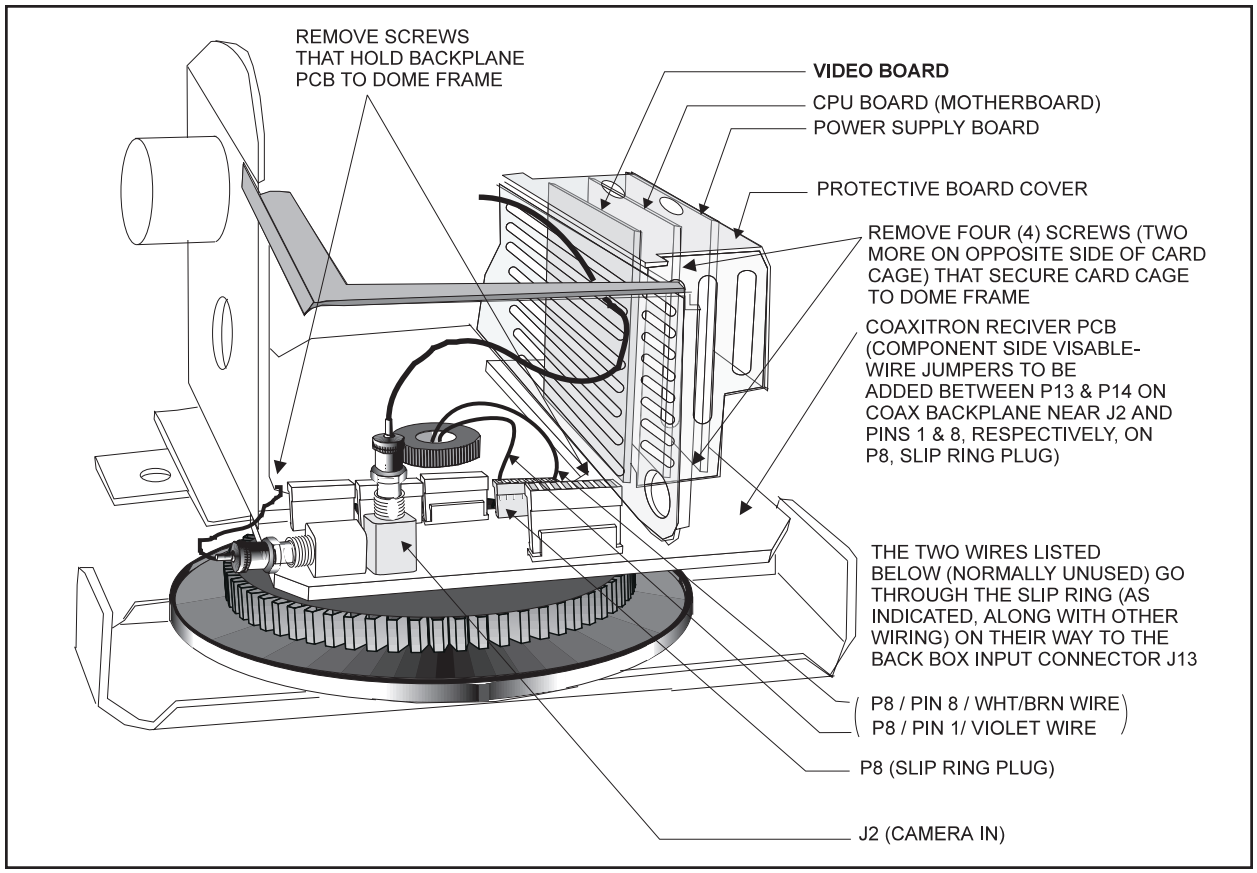

REMOVE SCREWS
THAT HOLD BACKPLANE
PCB TO DOME FRAME
VIDEO BOARD
CPU BOARD (MOTHERBOARD)
POWER SUPPLY BOARD
PROTECTIVE BOARD COVER
REMOVE FOUR (4) SCREWS (TWO MORE ON OPPOSITE SIDE OF CARD CAGE) THAT SECURE CARD CAGE TO DOME FRAME
COAXITRON RECIVER PCB (COMPONENT SIDE VISABLE- WIRE JUMPERS TO BE ADDED BETWEEN P13 & P14 ON COAX BACKPLANE NEAR J2 AND PINS 1 & 8, RESPECTIVELY, ON P8, SLIP RING PLUG)
THE TWO WIRES LISTED BELOW (NORMALLY UNUSED) GO THROUGH THE SLIP RING (AS INDICATED, ALONG WITH OTHER WIRING) ON THEIR WAY TO THE BACK BOX INPUT CONNECTOR J13
P8 / PIN 8 / WHT/BRN WIRE
P8 / PIN 1/ VIOLET WIRE
P8 (SLIP RING PLUG)
J2 (CAMERA IN)

Figure 7. Dome Drive Layout

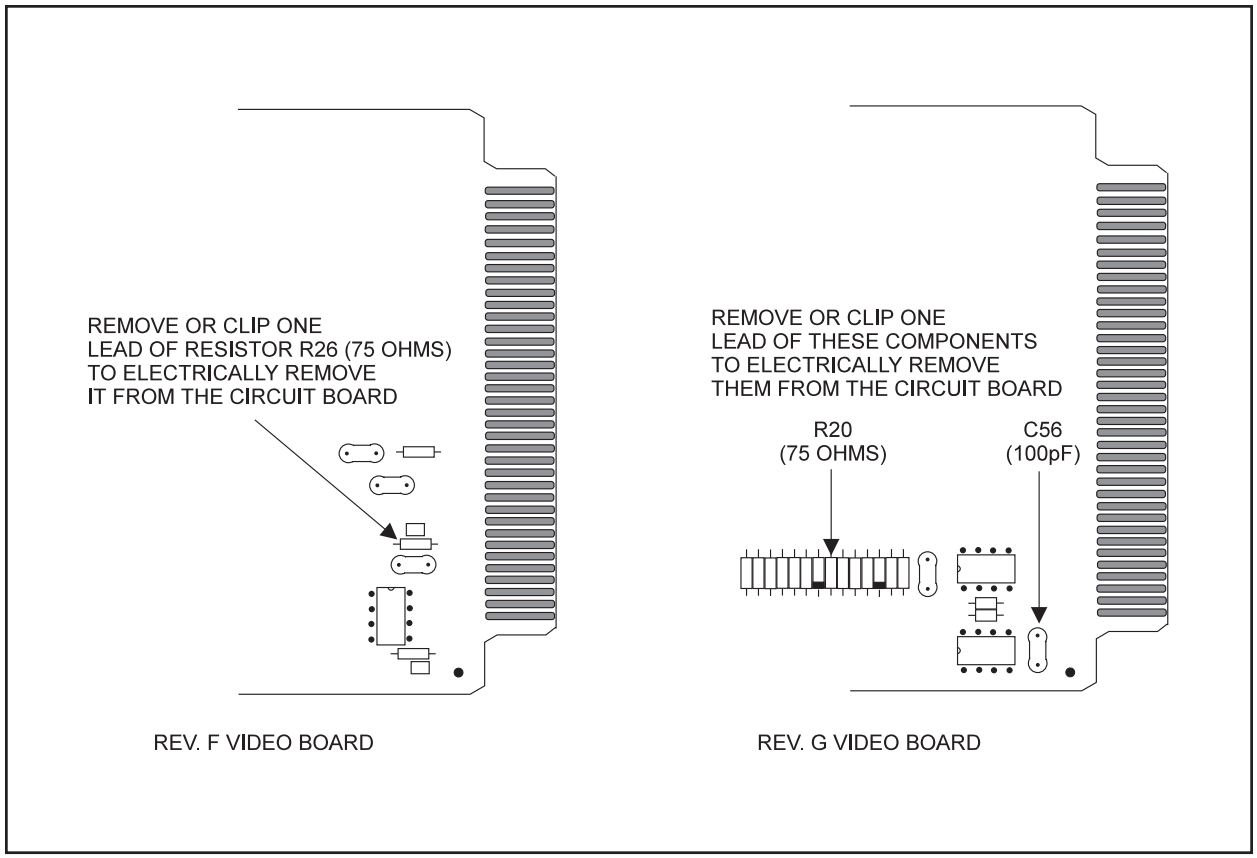


Figure 8. Video Board Component Locations

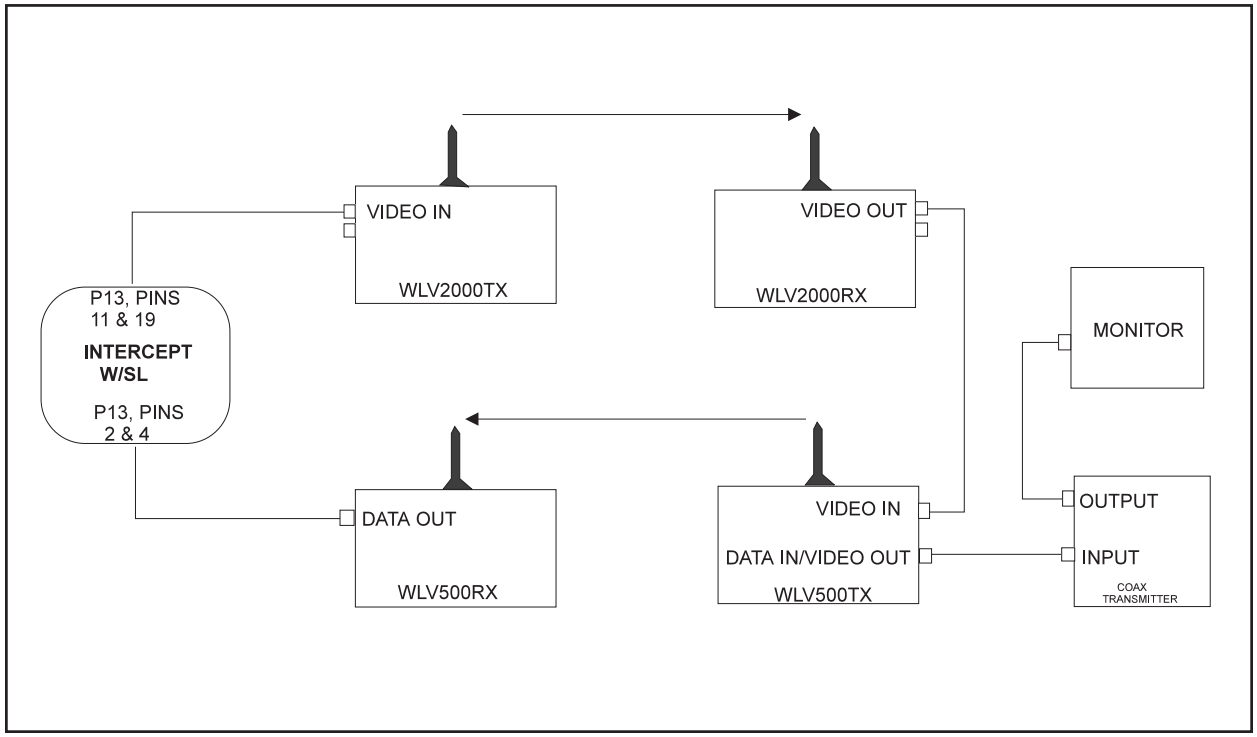


Figure 9. Block Diagram

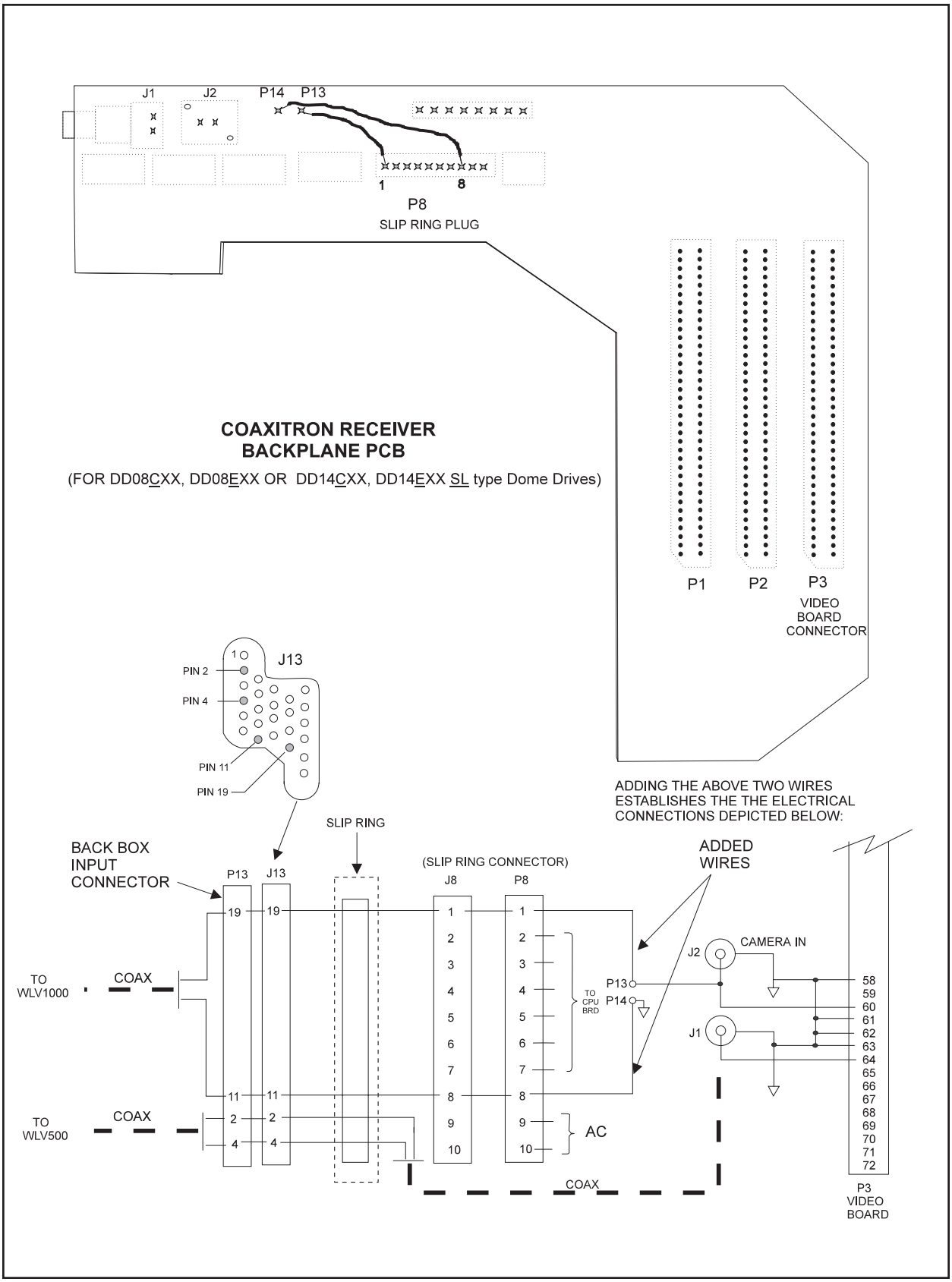


Figure 10. Coaxitron® Receiver Backplane PCB - Wire Lead Additions and Wiring Diagram

8.0 WIRING DIAGRAM

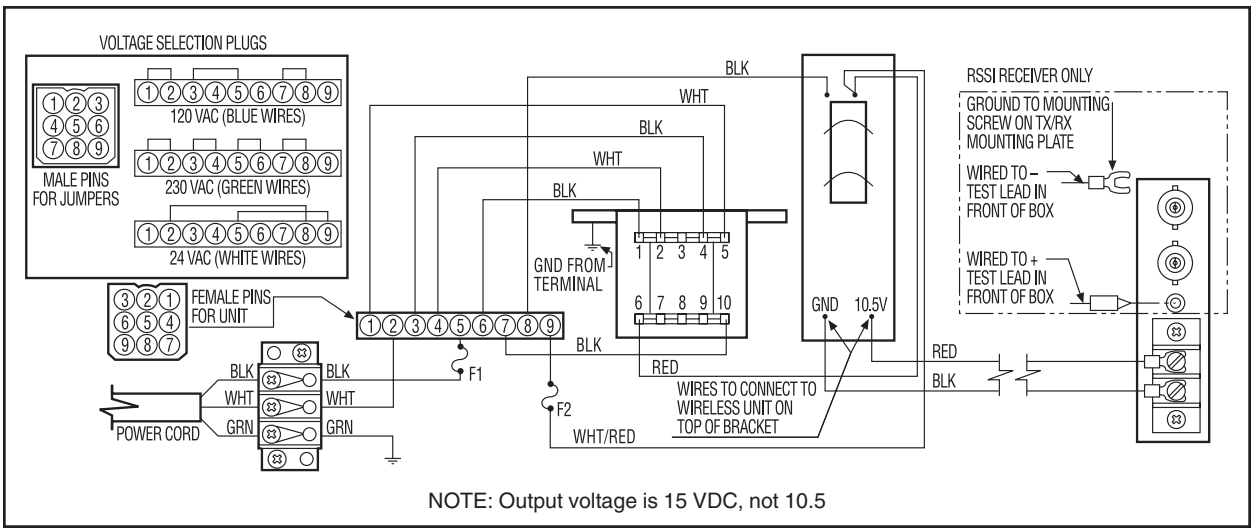


Figure 11. Outdoor Enclosure Wiring Diagram

9.0 MAINTENANCE

In cold, wet areas periodically visit the transmitter and receiver sites to prevent the buildup of snow and ice on the enclosures. A buildup of ice and snow will severely attenuate the microwave signals, producing snow in the picture. If the buildup is heavy enough, the system will stop working.

The enclosure has two one-quarter ampere slow-blow fuses. Fuse F1 protects the input power (24, 120, or 230 VAC). Fuse F2 is for 24 VAC operation only. Refer to Figure 4. To order replacement fuses, specify the part number FUS1/4SB.

10.0 SPECIFICATIONS

GENERAL (WLV500 AND WLV2000)

Power Input:	24, 120, or 230 VAC
Operating Distance:	2,000 feet (609.6 m) line-of-sight maximum range
Construction	
Enclosure:	Fiberglass box with NEMA 4X rating
Transmitter/ Receiver:	Aluminum
IEC 144 Rating:	IP66
Dimensions:	4.3" H x 11.5" L x 9.5" W (10.92 x 29.21 x 24.13 cm)
Cable Entry:	One (1) gland for power cord Two (2) glands for video and audio coaxial cables
Locking Method:	Latches with holes for padlocks
Weight (including wireless transmitter or receiver)	
WLV500 Trans:	9.5 lbs (4.31 kg)
WLV2000 Trans:	9.5 lbs (4.31 kg)
WLV500 Receiver	10.2 lbs (4.63 kg)
WLV2000 Receiver	10.4 lbs (4.72 kg)
Shipping (all units):	47.25 lbs (21.43 kg)
Operating Temperature:	-4° to 149° F (-20° to 65° C)
Storage	
Temperature:	-58° to 185° F (-50° to 85° C)
Humidity:	90% non-condensing

ELECTRICAL

DATA (WLV500)

Format:	NRZ
Pulse Width:	1 microsecond.
Duty Cycle:	50%
Level (Video Compatible):	1 V p-p

Impedance:	75 ohms
Connectors:	BNC

RF (WLV500)

Transmitter Radiated Power:	FCC Part 15 (15.249)
Transmit Antenna:	Attached, circular-polarized, patch antenna
Receive Antenna:	Removable, 11 dBi, circular-polarized, patch antenna
Receiver Connector:	TNC
Receiver Input Impedance:	50 ohms
Frequency Range:	2400 to 2483 MHz
Operating Frequencies (Factory Set):	
WLV500KTE-1L	2481 MHz
WLV500KTE-3R	2402 MHz
Modulation:	Wideband FM
Frequency Stability:	±0.005%

TRANSMITTER (WLV2000)

Operating Frequencies (Factory Set):	
WLV2000KTE-1R	2421.5 MHz
WLV2000KTE-3L	2461.5 MHz
Transmitter Power:	FCC Part 15 (15.249)
Frequency Stability:	±0.01%
Modulation:	FM
Video Input:	1.0 volt P-P, 75 ohms NTSC, PAL, SECAM (Color) EIA-170 (B &W) EIA-330 (CCTV)
Audio Subcarrier:	6.5 MHz above video frequency
Audio Input Impedance:	600 ohms
Maximum VSWR:	Open and short-circuit protected, all phases
Transmit Antenna:	Attached circular polarized patch antenna with 90° transmission path
Connectors:	
Video Input	BNC
Audio Input	BNC

RECEIVER (WLV2000)

Operating Frequencies (Factory Set):	
WLV2000KTE-1R	2421.5 MHz
WLV2000KTE-3L	2461.5 MHz
Frequency Stability:	±0.01%
Video Output:	1.0 volt P-P, 75 ohms NTSC, PAL, SECAM (Color) EIA-170 (B &W) EIA-330 (CCTV)
Image Rejection:	30 dB minimum
RF Input Impedance:	50 ohms
Audio Output Impedance:	600 ohms
Receive Antenna:	Detachable, polarized, 11 dBi
Connectors:	
Video Output	BNC
Audio Output	BNC
Antenna	TNC

AUDIO (WLV2000)

Frequency Response:	100 Hz to 15 KHz
Level:	1V p-p
Impedance:	600 ohms
Connector:	BNC
Pre-Emphasis/ De-Emphasis:	75 microseconds

11.0 WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years on FT/FR8000 Series fiber optic products.
- Three years on Genex® Series products (multiplexers, server, and keyboard).
- Three years on Camclosure® and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products.
- Two years on Spectra®, Esprit®, ExSite™, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit® and WW5700 Series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, and Endura™ Series distributed network-based video products.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:
1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.
Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico, send goods to:

Service Department
Pelco
3500 Pelco Way
Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:
If the goods are to be sent by a COURIER SERVICE, send the goods to:

Pelco
3500 Pelco Way
Clovis, CA 93612-5699 USA

If the goods are to be sent by a FREIGHT FORWARDER, send the goods to:

Pelco c/o Expeditors
473 Eccles Avenue
South San Francisco, CA 94080 USA
Phone: 650-737-1700
Fax: 650-737-0933

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Pelco
3500 Pelco Way, Clovis, CA 93612-5699 (559) 292-1981 • (800) 289-9100
FAX (800) 289-9150 or (559) 292-3827
International customers call 1-559-292-1981 or FAX 1-559-348-1120

(Product specifications subject to change without notice.)

C914M